

# Jacob Englert, M.S.

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<https://jacobenglert.rbind.io> | <https://www.linkedin.com/in/jacobenglert/>

## EDUCATION

### Emory University

Atlanta, GA

*Doctor of Philosophy (Ph.D.), Biostatistics*

Expected May 2025

- Thesis: Bayesian Tree-Based Methods for Estimating Heterogeneous Effects of Environmental Exposures

*Master of Science (M.S.), Biostatistics*

May 2023

- GPA: 3.9/4.0
- Relevant Coursework: Machine Learning, Bayesian Statistics, Longitudinal and Multi-level Data Analysis, Generalized Linear Models, Survival Analysis, Advanced Statistical Computing, Statistical Inference, Probability Theory

### Northern Kentucky University

Highland Heights, KY

*Bachelor of Science (B.S.), Mathematics and Statistics*

May 2019

- GPA: 4.0/4.0
- Relevant Coursework: Time-Series Analysis, Regression Analysis, Design and Analysis of Experiments, Econometrics, Differential Equations, Linear Algebra, Calculus

## PROFESSIONAL EXPERIENCE

### Medpace

Cincinnati, OH

*Data Analyst*

Oct 2019 – Jul 2020

- Designed interactive Spotfire dashboards used to monitor patient safety and compliance
- Conducted power simulations in R to study impacts of over-stratification in clinical trial designs

*Biostatistics Intern*

Jan 2018 – Jun 2019

- Programmed tables and figures to summarize safety and efficacy endpoints
- Refined department-wide production programs and created SAS graphics templates

### Burkardt Consulting Center

Highland Heights, KY

*Statistical Consultant*

Aug 2018 – May 2019

- Advised academic and industrial clients on the formulation of research questions, data collection, and statistical methodology

### Federal Bureau of Investigation

Cincinnati, OH

*Student Workforce Trainee*

Jun 2017 – Dec 2017

- Assisted cybercrimes squad with ongoing investigations by identifying statistical anomalies in case data
- Obtained top secret security clearance

## RESEARCH EXPERIENCE

### Emory University

Atlanta, GA

*Research Assistant*

May 2021 – Present

- Advised the SPIRIT (Sharing the Patient's Illness Representations to Increase Trust) team on methods to model correlated survey data from a multi-site cluster randomized trial, and conducted these analyses using generalized linear mixed models and generalized estimating equations in R and SAS
- Evaluated spatial smoothing and cluster detection techniques for opioid overdose records in Georgia using R

### Northern Kentucky University

Highland Heights, KY

*Research Assistant*

Jan 2017 – May 2019

- Applied singular spectrum analysis to discover trends and generate forecasts for temperatures in Togo, Africa
- Collaborated with Cincinnati Children's Hospital to develop a logistic regression model to predict the development of chronic kidney disease in children with acute kidney injury
- Investigated the effectiveness of Shinn weights to decipher Japanese naval messages from World War II

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## SKILLS

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- **Programming Languages:** R, SAS, Python, SQL, C++ (Rcpp), Mathematica
- **Software:** Spotfire, SPSS, JMP, Minitab, Tableau, ArcMap, MS Office, Git, HPC systems
- **Certifications:** SAS Certified Base Programmer for SAS 9

## TEACHING EXPERIENCE

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### Emory University

#### Teaching Assistant

- R Bootcamp for Epidemiology Fall 2023
- Applied Linear Models Spring 2022, Spring 2023
  - Guest Lecture: Poisson Regression
- Longitudinal and Multilevel Data Analysis Fall 2022
  - Guest Lecture: Bayesian Hierarchical Models
  - Guest Lecture: Simulation Studies in R
- Geographic Information Systems (GIS) Spring 2021, Fall 2021

### Northern Kentucky University

#### Teaching Assistant

- Introduction to Statistical Methods Spring 2016 – Fall 2018

## AWARDS

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- *First Year Qualifying Exam Top Performer (2021)*, Dept. of Biostatistics and Bioinformatics, Emory University
- *Laney Graduate School Fellowship (2020)*, Laney Graduate School, Emory University
- *Outstanding Senior in Statistics (2019)*, Dept. of Mathematics and Statistics, Northern Kentucky University
- *Outstanding Senior in Mathematics (2019)*, Dept. of Mathematics and Statistics, Northern Kentucky University
- *Honorable Mention*, 2019 COMAP Mathematical Modeling Competition
- *Outstanding Poster Presentation*, 2019 Joint Mathematics Meetings, Mathematical Association of America
- *Honorable Mention*, 2018 Public Health Data Challenge, American Statistical Association
- *Outstanding Student Writing Award (2016)*, Dept. of English, Northern Kentucky University

## ACTIVITIES

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- Academic Tutoring, Emory University and Northern Kentucky University
- Scorekeeper, John O'Bryan Mathematics Competition, Northern Kentucky University
- Senator & Justice, Student Government Association, Northern Kentucky University

## MEMBERSHIP

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- American Statistical Association (Emory Chapter), Emory University